Forest Health South Integrated Resources Timber Contract

(IRTC)

SCHEDULE OF ITEMS AND SPECIFICATIONS

Schedule of Items

SCHEDULE OF ITEMS:

Item #	Description	Unit of Measure	Quantity
Mandatory Work			
1	Road Reconditioning, NFSR 28B	Miles	2.8
2	Road Reconditioning, NFSR 28F	Miles	0.5
3	Road Reconditioning, NFSR 98	Miles	0.8
4	Trail Reroute, Jake Mountain	Miles	1.5
Optional Work			
5	Gate Installation	Each	4
6	Road Reconditioning, NFSR 135	Miles	2.5
7	Barricade Installation	Each	1

Item 1: Road Reconditioning, NFSR 28B

General Specifications

NFSR 28B will be reconditioned in its entirety, 2.8 miles, to provide a more stable road condition by improving the drainage and provide for a safer travel way for the visiting public. FSR 28B receives a moderate to high amount of visitor use due to proximity to the Jake and Bull Mountain Trail System. Road reconditioning work will include surface blading, spot surfacing, grade dip installation and maintenance, cleaning and reconditioning of culverts, and drainage structure armoring, and mowing/brushing of roadside vegetation.

SCOPE OF PROJECT

The contractor shall furnish all equipment, labor, transportation, supervision, and perform all work required for the road reconditioning on NFSR 28B on the Chattahoochee-Oconee National Forest in accordance with the specifications and provisions of the project item.

DESCRIPTION AND LOCATION

The project for road reconditioning of NFSR 28B begins at station 00, the intersection of NFSRs 28-1 and 28B, and continues 2.8 miles to the end of road, EOP. ***See map following Item 2***.

TECHNICAL SPECIFICATIONS

Road reconditioning will be performed in accordance with the project specifications provided in Appendix B.

GOVERNMENT FURNISHED PROPERTY

NONE

INSPECTION AND ACCEPTANCE

Project Item 1 will be accepted when the work is completed according to the project specifications. If the work completed is accepted, the contractor shall proceed according to the Work Progress Schedule. If the work is not accepted, the contractor shall not receive project credit until completing any remedial work required for acceptance. If the area cannot be brought up to specifications, credits will be reduced or not be awarded. Typicals and descriptions may be found in the appendix following the Schedule of Items.

Chattahoochee National Forest
Blue Ridge Ranger District

Description of Work Items

Forest Health South IRTC Stewardship
Mandatory Project Item #1
NFSR 28B Road Reconditioning

Schedule of Items NFSR 28B, 2.8 miles

Station/ Mile Post	**Work Description**
0+00	**BEGIN PROJECT** at the Junction of NFSR 28B with NFSR 28-1. Begin Road Reconditioning and Road Brushing/Clearing. The Road Ahead will need to be Crowned with Ditches and Culverts in Sections and Outsloped with Drain Dips in Sections.
0+10	Existing CMP – Recondition Inlet and Outlet Begin Ditch Reconstruction – Left and Right
0+54	Vertical Route Marker
2+18	Existing Drain Dip - Reconstruct
4+97	Begin Ditch Reconstruction - Left
5+69	Intersection with Trail 223N - Left
6+67	End Ditch Reconstruction Left Leadoff Ditch – Left – Recondition
6+85	Construct Drain Dip
6+95	Trail 223Q – Right
9+59	Existing Drain Dip – Reconstruct
10+41	FDR 28-F/Trail 223N – Left

12+88	Construct Drain Dip to Drain Right
14+30	Construct Drain Dip to Drain Right
18+70	Construct Turnout to Drain Right
22+12	Construct Drain Dip to Drain Right
23+19	Existing CMP – Recondition Inlet and Outlet Reconstruct Ditch Each Way of Culvert Until Grade Breaks
24+67	Existing CMP – Recondition Inlet and Outlet and Reconstruct Ditch 50 Feet Each Way of Culvert.
27+00	Construct Drain Sag to Drain
32+80	Existing CMP – Recondition Inlet and Outlet. Begin Ditch Reconstruction – Left
34+81	Existing CMP – Recondition Inlet and Outlet
36+59	End Ditch Reconstruction - Left
36+84	Construct Drain Dip to Drain Right Begin Ditch Reconstruction on Left Ahead at Station 37+10
37+97	Existing CMP – Recondition Inlet and Outlet
41+00	Construct Drain Dip
42+46	Exiting Turnouts – Left and Right – Recondition Both
45+42	Construct Drain Dip to Drain Left
47+70	Existing CMP – Recondition Inlet and Outlet Begin Ditch Reconstruction – Right
50+86	Existing CMP – Recondition Inlet and Outlet
52+31	Existing CMP – Recondition Inlet and Outlet End Ditch Reconstruction Right – Ahead at Grade Break
55+00	Old Forest Road on Left Closed with Wooden Traffic Barricade

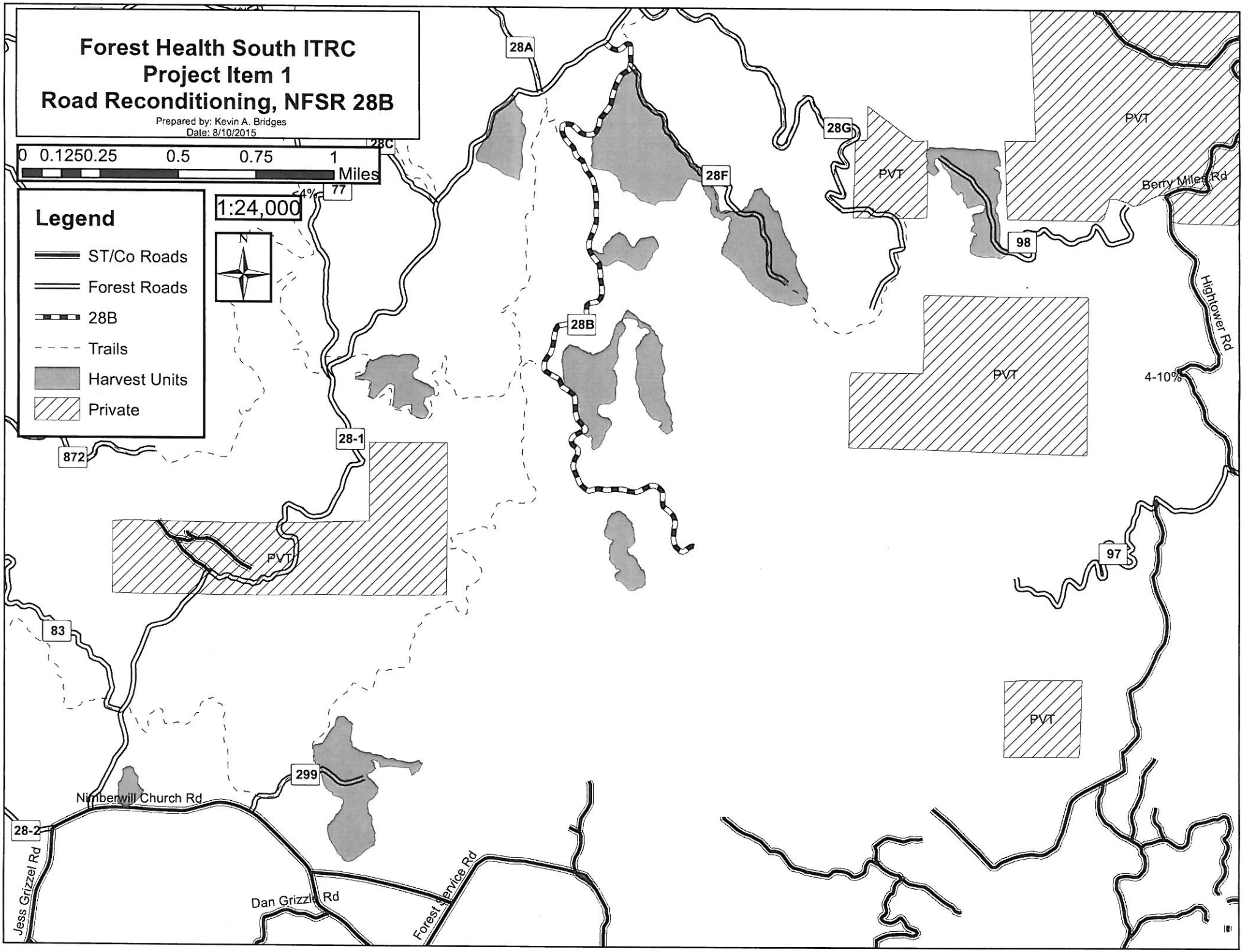
56+20	Construct Drain Sag
59+00	Construct Drain Sag
62+94	Begin Ditch Reconstruction Left
63+49	Existing CMP – Recondition Inlet and Outlet
63+95	End Ditch Reconstruction Left
64+10	Roadbed Drainage Needed; Reshape and Cut Outlet to the Right to Drain
67+00	Construct Drain Dip to Drain Right
68+45	Existing CMP – Recondition Inlet and Outlet Reconstruct Ditches Each Way of Culvert Until Grade Breaks
70+97	Existing CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditches Each Way of Culvert Until Grade Breaks
72+57	Construct Drain Dip to Drain Right
75+60	Existing CMP – Clean and Recondition Inlet and Outlet
76+95	Construct Drain Dip to Drain Right
77+60	
79+75	Construct Drain Dip to Drain Right
80+29	Existing CMP – Clean and Recondition Inlet and Outlet
81+50	Construct Drain Dip to Drain Right
83+23	Trail 223H on the Right
84+25	Construct Drain Dip to Drain Right
86+75	Construct Drain Dip to Drain Right
89+25	Construct Drain Dip to Drain Right
90+00	Existing Turnout with Leadoff ditch – Right approx. 50 Feet – Recondition

90+58	Existing Turnout with Leadoff Ditch – Left approx. 100 Feet – Recondition
92+30	Construct Drain Dip to Drain Right into Existing Leadoff Ditch approx. 50' – Recondition
95+00	Construct Drain Dip to Drain Right
96+35	Existing Leadoff ditches Right and Left approximately 100' – Recondition Both. Construct Drain Dip
99+40	Construct Drain Dip to Drain Right
101+50	Construct Drain Dip to Drain Right
102+85	Existing CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditches Each Way of Culvert Until Grade Breaks
105+45	Construct Drain Dip to Drain Right
108+00	Construct Drain Dip to Drain Right
109+45	Construct Drain Dip to Drain Right
109+95	
111+60	Construct Drain Dip to Drain Right
112+65	Existing CMP – Clean and Recondition Inlet and Outlet
114+45	Construct Drain Sag to Drain
115+13	Old Road Template on the Left Closed with Wooden Traffic Barricade
115+50	Construct Drain Dip to Drain Left
117+25	Construct Drain Dip to Drain Left
119+70	Construct Turnout Right with 50 Foot Leadoff Ditch
125+00	Construct Turnout Right

125+35	Old Spur Road to the Left
129+00	Construct Drain Dip to Drain Right
131+00	Construct Drain Dip to Drain Right
133+92	Old Road Template to the Left
134+15	Existing CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditch Left Ahead to Station 136+25.
137+00	Construct Drain Dip to Drain Right
139+00	Construct Drain Dip to Drain Right
140+30	Existing Leadoff Ditch Left – Approx. 100 Feet - Recondition
142+30	Construct Drain Dip to Drain Right
144+00	Construct Drain Dip to Drain Right
144+32	Existing 18" diameter CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditch Ahead to Grade Break
147+42	Old Road Template on Left Closed to Traffic with Bar Gate
148+35	**END PROJECT** at Turnaround Area

NFSR # 28B; Moss Hill

Pay Items	Name	Measurement	Unit Price	Quantity	Total Price
203 (3)	Construct Drain Dip	Each	$ 75.00	31	$ 2,325.00
203 (4)	Reconstruct Drain Dip	Each	$ 50.00	2	$ 100.00
210 (2)	Brushing/Clearing & Grubbing	Mile	$ 650.00	2.8	$ 1,820.00
306 (3)	Reconditioning of Roadbed Compaction A	Mile	$ 550.00	0	$ -
306 (4)	Heavy Reconditioning of Roadbed Compaction A	Mile	$ 850.00	2.8	$ 2,380.00
304 (3)	Crushed Aggregate Surfacing Gradation **GDOT #4 Stone** Compaction A	Ton	$ 24.00	684.00	$ 16,416.00
304 (4)	Crushed Aggregate Surfacing Gradation **GDOT GAB** Compaction A	Ton	$ 20.00	324.00	$ 6,480.00
601 (2)	Mobilization	Lump Sum	$ 1,200.00	1.00	$ 1,200.00
625 (2)	Seeding Fertilizing and Mulching Dry Method	Lump Sum	$ 850.00	1.00	$ 850.00
Base Total					**$ 31,571.00**


Forest Health South ITRC
Project Item 1
Road Reconditioning, NFSR 28B
Prepared by: Kevin A. Bridges
Date: 8/10/2015
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Miles
1:24,000
Legend
ST/Co Roads
Forest Roads
28B
Trails
Harvest Units
Private
28A
28C
28F
28G
28B
28-1
28-2
872
77
98
97
299
83
PVT
Berry Miles Rd
Hightower Rd
4-10%
Nimberwill Church Rd
Jess Grizzel Rd
Dan Grizzle Rd
Forest Service Rd

Item 2: Road Reconditioning, NFSR 28F

General Specifications

NFSR 28F will be reconditioned in its entirety, 0.5 miles, to provide a more stable road condition by improving the drainage and provide for a safer travel way for trail users. FSR 28F is to become a Level 1 road that will be used primarily as part of the Jake and Bull Mountain Trail System. Road reconditioning work will include surface blading, spot surfacing, grade dip installation and maintenance, cleaning and reconditioning of culverts, and drainage structure armoring, and mowing/brushing of roadside vegetation.

SCOPE OF PROJECT

The contractor shall furnish all equipment, labor, transportation, supervision, and perform all work required for the road reconditioning on NFSR 28F on the Chattahoochee-Oconee National Forest in accordance with the specifications and provisions of the project item.

DESCRIPTION AND LOCATION

The project for road reconditioning of NFSR 28F begins at station 00, the intersection of NFSRs 28B and 28F, and continues 0.5 miles to the end of road, EOP. ***See map***.

TECHNICAL SPECIFICATIONS

Road reconditioning will be performed in accordance with the project specifications provided in Appendix B.

GOVERNMENT FURNISHED PROPERTY

NONE

INSPECTION AND ACCEPTANCE

Project Item 2 will be accepted when the work is completed according to the project specifications. If the work completed is accepted, the contractor shall proceed according to the Work Progress Schedule. If the work is not accepted, the contractor shall not receive project credit until completing any remedial work required for acceptance. If the area cannot be brought up to specifications, credits will be reduced or not be awarded. Typicals and descriptions may be found in the appendix following the Schedule of Items.

Chattahoochee National Forest
Blue Ridge Ranger District

Description of Work Items

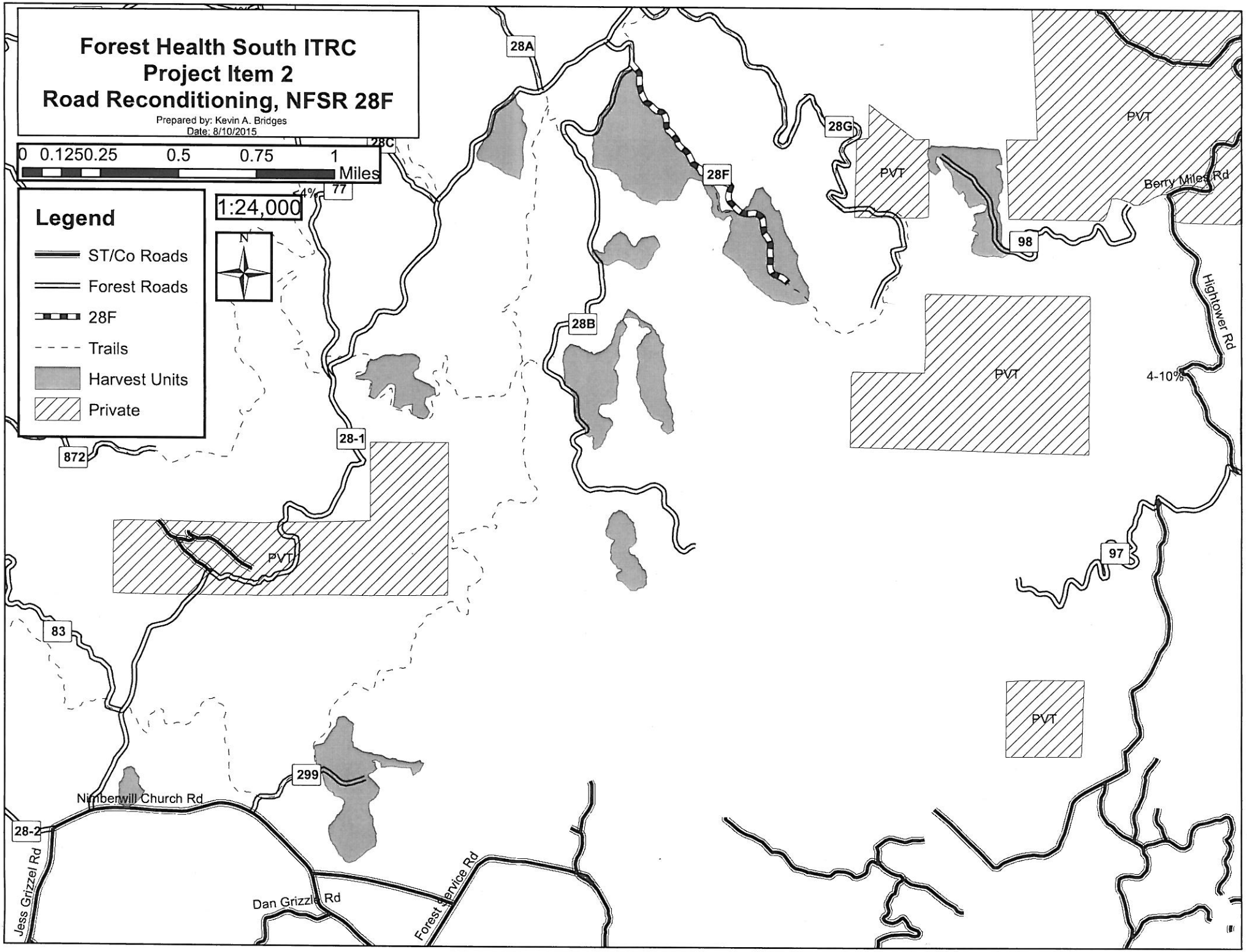
Forest Health South IRTC Stewardship
Mandatory Project Item #1
NFSR 28B Road Reconditioning

Schedule of Items NFSR 28F, 0.5 miles

Station/ Mile Post	**Work Description**
0+00	**BEGIN PROJECT** at the Junction of FDR 28-F with FDR 28-B. Begin Road Reconditioning and Road Brushing/Clearing. The Road Ahead will need to be Outsloped with Drain Dips in Sections.
1+97	Existing Mudhole in Roadbed – Cut and Reshape to Drain
3+39	Existing Mudhole in Roadbed – Cult and Reshape to Drain
5+50	Construct Drain Dip – Drain to Right
7+50	Construct Drain Dip – Drain to Right
9+50	Construct Drain Dip – Drain to Right
12+00	Construct Drain Dip – Drain to Left
13+62	Construct Drain Dip – Drain to Left
13+90	Trail 223N – Left
14+75	Existing Mudhole and Ruts in Roadbed – Cut and Reshape to Drain Continue Work to Station 16+40
17+40	Existing Mudhole in Roadbed Construct Drain Dip – Drain to Left
20+30	Existing Leadoff Ditch to the Right 100' – Recondition Construct Drain Dip
21+00	Existing Mudhole in Roadbed – Cut and Shape Road Template to Drain
22+15	Turnaround Area
22+40	**END OF PROJECT** Begin Road Reconditioning and Road Brushing/Clearing.

NFSR # 28F; Upper Nimblewill

Pay Items	Name	Measurement	Unit Price	Quantity	Total Price
203 (5)	Construct Drain Dip	Each	$ 75.00	7	$ 525.00
210 (3)	Brushing/Clearing & Grubbing	Mile	$ 650.00	0.5	$ 325.00
306 (5)	Reconditioning of Roadbed Compaction A	Mile	$ 550.00	0	$ -
306 (6)	Heavy Reconditioning of Roadbed Compaction A	Mile	$ 850.00	0.5	$ 425.00
304 (5)	Crushed Aggregate Surfacing Gradation **GDOT #4 Stone** Compaction A	Ton	$ 24.00	144.00	$ 3,456.00
304 (6)	Crushed Aggregate Surfacing Gradation **GDOT GAB** Compaction A	Ton	$ 20.00	54.00	$ 1,080.00
601 (3)	Mobilization	Lump Sum	$ 500.00	1.00	$ 500.00
625 (3)	Seeding Fertilizing and Mulching Dry Method	Lump Sum	$ 175.00	1.00	$ 175.00
Base Total					**$ 6,486.00**


Forest Health South ITRC
Project Item 2
Road Reconditioning, NFSR 28F
Prepared by: Kevin A. Bridges
Date: 8/10/2015
0 0.1250.25 0.5 0.75 1
Miles
1:24,000
N
Legend
ST/Co Roads
Forest Roads
28F
Trails
Harvest Units
Private
28A
28C
28F
28G
28B
28-1
28-2
872
77
<4%
98
97
299
83
PVT
PVT
PVT
PVT
Berry Miles Rd
Highlower Rd
4-10%
Nimberwill Church Rd
Jess Grizzel Rd
Dan Grizzle Rd
Forest Service Rd

Item 3: Road Reconditioning, NFSR 98

General Specifications

NFSR 98 will be reconditioned in its entirety, 0.8 miles, to provide a more stable road condition by improving the drainage and provide for a safer travel way for the visiting public. Road reconditioning work will include surface blading, spot surfacing, grade dip installation and maintenance, cleaning and reconditioning of culverts, and drainage structure armoring, and mowing/brushing of roadside vegetation.

SCOPE OF PROJECT

The contractor shall furnish all equipment, labor, transportation, supervision, and perform all work required for the road reconditioning on NFSR 98 on the Chattahoochee-Oconee National Forest in accordance with the specifications and provisions of the project item.

DESCRIPTION AND LOCATION

The project for road reconditioning of NFSR 98 begins at station 00, the intersection of NFSR 98 and Hightower Rd., and continues 0.8 miles to the end of road, EOP. ***See map***.

TECHNICAL SPECIFICATIONS

Road reconditioning will be performed in accordance with the project specifications provided in Appendix B.

GOVERNMENT FURNISHED PROPERTY

NONE

INSPECTION AND ACCEPTANCE

Project Item 3 will be accepted when the work is completed according to the project specifications. If the work completed is accepted, the contractor shall proceed according to the Work Progress Schedule. If the work is not accepted, the contractor shall not receive project credit until completing any remedial work required for acceptance. If the area cannot be brought up to specifications, credits will be reduced or not be awarded. Typicals and descriptions may be found in the appendix following the Schedule of Items.

Chattahoochee National Forest
Blue Ridge Ranger District

Description of Work Items

Forest Health South IRTC Stewardship
Mandatory Project Item #1
NFSR 98 Road Reconditioning

Schedule of Items NFSR 98, 0.8 miles

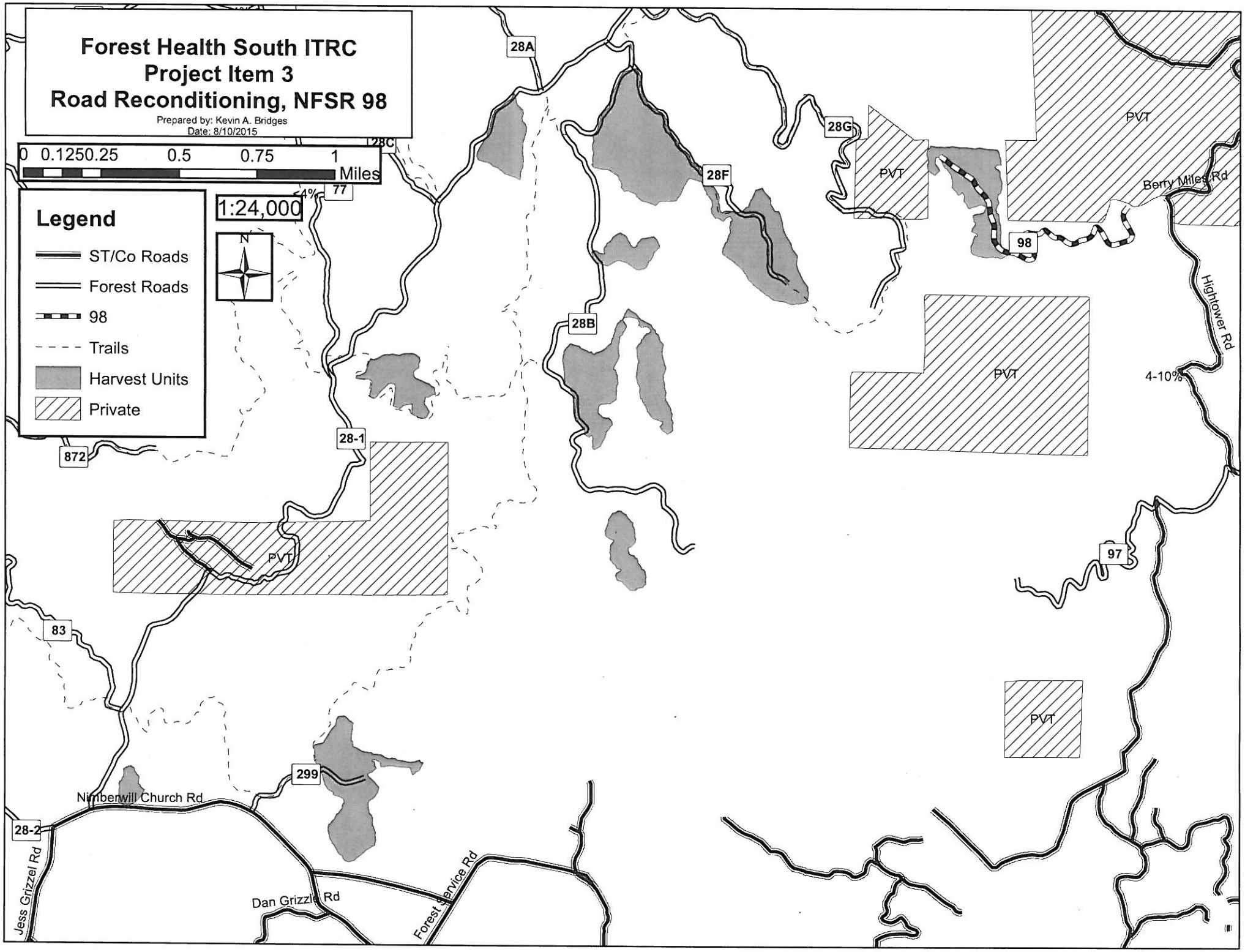
Station/ Mile Post	**Work Description**
0+00	**BEGIN PROJECT** at the Junction of FDR 98 with FDR County Road 72 (Hightower Church Road) Begin Road Reconditioning and Road Brushing/Clearing. The Road Ahead will need to be Outsloped with Drain Dips in Sections and Crowned with Ditches and Culverts Reconditioned in Sections.
0+05	Existing 18" CMP – Top of Culvert is Exposed
1+15	Existing Vertical Route Marker
1+35	Reconstruct Drain Dip and Leadoff Ditch 50' Left
2+85	Construct Drain Dip – Drain to Left
5+26	Reconstruct Drain Dip
7+75	Construct Drain Dip – Drain to Left
9+30	Construct Drain Dip – Drain to Left
12+00	Construct Drain Dip – Drain to Left
12+75	Existing 18" CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditch 50' Each Way of Culvert
14+00	Construct Drain Dip – Drain to Left
14+25	Reconstruct Ditch to the Right Ahead to CMP at Station 14+75
14+75	Existing 30" CMP – Recondition
15+00	Leadoff Ditch to Right 75' – Recondition Reconstruct Ditch to the Right Ahead to Station 15+25
15+50	Construct Drain Dip – Drain to Left
17+25	Construct Drain Dip – Drain to Left
19+11	Construct Drain Dip – Drain to Left

20+75	Construct Drain Dip – Drain to Left
21+65	Existing 18" CMP – Clean and Recondition Inlet and Outlet Begin Ditch Reconstruction Right
22+75	Existing 18" CMP – Clean and Recondition Inlet and Outlet
23+75	End Ditch Reconstruction Right
24+00	Construct Drain Dip – Drain to Left
26+00	Existing Leadoff Ditch Right – Recondition Reconstruct Ditch on Right Ahead to CMP at Station 26+15
26+15	Existing 18" CMP – Clean and Recondition Inlet and Outlet
26+30	Leadoff Ditch Right 50' – Recondition Reconstruct Ditch on Right Ahead to Station 26+90
27+15	Construct Drain Dip – Drain to Left
28+45	Construct Drain Dip – Drain to Left Begin Ditch Reconstruction on Right at Approximate Station 28+75 and Continue Ahead to CMP at Station 39+82
29+82	Existing 18" CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditch on Right Ahead to Approx. Station 30+25
30+57	Construct Drain Dip
31+85	Existing 18" CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditch on Right Ahead to Approx. Station 32+35
32+60	Construct Drain Dip – Drain to Left
34+25	Construct Drain Dip – Drain to Left
36+65	Construct Drain Dip – Drain to Left
38+65	Construct Drain Dip – Drain to Left
40+62	Turnaround Area
40+96	**END PROJECT** at Earthen Berm End Road Reconditioning and Road Brushing/Clearing.

NFSR # 98; Dunn Branch

Pay Items	Name	Measurement	Unit Price	Quantity	Total Price
203 (1)	Construct Drain Dip	Each	$ 75.00	17	$ 1,275.00
203 (2)	Reconstruct Drain Dip	Each	$ 50.00	2	$ 100.00
210 (1)	Brushing/Clearing & Grubbing	Mile	$ 650.00	0.8	$ 520.00
306 (1)	Reconditioning of Roadbed Compaction A	Mile	$ 550.00	0	$ -
306 (2)	Heavy Reconditioning of Roadbed Compaction A	Mile	$ 850.00	0.8	$ 680.00
304 (1)	Crushed Aggregate Surfacing Gradation **GDOT #4 Stone** Compaction A	Ton	$ 24.00	306.00	$ 7,344.00
304 (2)	Crushed Aggregate Surfacing Gradation **GDOT GAB** Compaction A	Ton	$ 20.00	108.00	$ 2,160.00
601 (1)	Mobilization	Lump Sum	$ 900.00	1.00	$ 900.00
625 (1)	Seeding Fertilizing and Mulching Dry Method	Lump Sum	$ 450.00	1.00	$ 450.00

Base Total **$ 13,429.00**


Forest Health South ITRC
Project Item 3
Road Reconditioning, NFSR 98
Prepared by: Kevin A. Bridges
Date: 8/10/2015
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Miles
1:24,000
Legend
ST/Co Roads
Forest Roads
98
Trails
Harvest Units
Private
28A
28C
28F
28G
28B
28-1
28-2
872
77
4%
83
299
98
97
PVT
Berry Miles Rd
Hightower Rd
4-10%
Nimberwill Church Rd
Jess Grizzel Rd
Dan Grizzle Rd
Forest Service Rd

Item 4: Trail Reroute

Scope of Contract

The intent of this project is to use trail re-routes to construct a series of non-motorized, multi-use, interconnected loop trails, of varying lengths and difficulty levels totaling a miles. Project activities on this trail system will include approximately 1.5 miles of new trail construction.

Trails within the Jake and Bull Trails Project are to be managed as "Class 3 Pack and Saddle" as found in the FSH 2309.18, Section 23.12, Appendix A (attached). There are specific ***design and construction criteria*** required to meet this management goal. The contractor will be required to produce a site plan based upon a survey of the proposed layout.

Contractor will perform drainage maintenance that includes cleaning culverts, water bards, drainage dips, ditches, and directing water from the trail, where washing of the trail bed is or has been occurring.

Seed and mulch all disturbed areas outside of trails, including drainage dip wing ditches, culverts, and obliterated trails. All disturbed areas as part of drainage ditch maintenance outside of the tread way will be seeded and mulched with the exception of the lowest active part of the wing ditch that drains water. Seeding and mulching should not impede water drainage. Ditches that drain directly into and are immediately adjacent to a water source should be completely seeded and mulched.

The trail centerline has been mapped and flagged on the ground. The contractor will use this centerline to layout and construct the new routes within a 25 foot corridor, either side of centerline, with trail maintenance equipment.

Project Location

The work is to be performed at the Jake and Bull Trail System. To locate project site from Dahlonega, GA take GA-52/GA-9 towards Nimblewill for 3.6 miles. Turn right onto GA-52 and go for 4.6 miles. Turn right onto Nimblewill Church Road and go for 2.2 miles. Turn right onto FSR 28-1 and continue approximately 1.25 miles past the intersection of FSR77 and FSR28-1.

Project Work Items: Complete applicable standard specifications and drawings ate attached for reference in Appendix B.

Construct approximately 1.5 miles of trail to replace non-sustainable sections of trails and reduce soil impacts by creating new routes to disperse use within the Jake and Bull Trail System. Construction will include trails capable of supporting horse, bike and foot travel with a maximum 36'' tread width, 10' height and 4'-8' width clearance. When necessary, water control techniques such as grade dips will be used to reduce the potential for future soil movement and loss. More specifically, trail construction will include the following:

- Construct approximately1.5 miles of new trail to connect the Jake Mountain Trail (#223H) with the Nimblewill Branch Spur Trail (#223M), from its intersection of FS 28-1.

If necessary, use mechanized equipment to reshape and scarify disturbed ground to reduce water movement and aid in the re-vegetation of disturbed areas. Seed and mulch disturbed areas and plant a Forest Service-approved seed mixture in these sections.

Cost Estimate

Item Number	Item Description	Unit	Estimated Quantity	Unit Cost	Total Cost
M1	Mobilization	LS	1	3,000	3,000
LP	Trail Layout/Planning	FT	7,875	1,500	1,500
SRV	Survey	FT	7,875	1,500	1,500
SP	Site Plans	PG	1	2,000	2,000
PM	Permits	LS	1	1,500	1,500
SMF	Seed/Mulch/Fertilizer	AC	2	750	1,500
CST	Construction	FT	7,875	10,000/mi	15,000
				TOTAL:	26, 000

Overview

Provide layout, planning, survey, required permits, and construction for non-motorized multi-use equestrian and mountain biking trails that are low maintenance, sustainable, and that meet the needs of the user.

The contractor must follow these steps established for the project in order to ensure timely Forest Service participation at key junctures in the life of the project.

Step 1 Layout and Planning

The project will require layout and survey of approximately 1.5 miles of horse trails. These trails have been mapped (attached to this request) and the centerline has been flagged on the ground. The location of this centerline has been approved through the NEPA process and is designed to keep the trail consistent with current management direction. The contractor is required to finalize the layout of the trail to be within ***25*** feet of the flagged centerline. In addition to these requirements, the contractor is required to construct trails with a maximum tread with between 24 and 36 inches.

Trail planning may be conducted concurrently with the trail layout or immediately after. This plan will emphasize the design and location of structures needed for control of overland water flow along the trail to minimize erosion and sediment. This can include, but is not limited to, structures such as drainage dips, water bars, climbing turns, stream crossings, etc.

Submittal and approval of trail layout and plan is required by the Forest Service after work has been completed at 25 percent (layout), 50 percent (.75 mile), and 100 percent (1.5 miles) of new trail are completed . Upon final approval by the Forest Service, the contractor will submit a final list of stations, work lists, and cross reference the appropriate drawings and specifications from *Standard Specifications for Construction and Maintenance of Trails, EM-7720-103 December 2014. Drawings can be found at this website:*
http://www.fs.fed.us/.ftproot/pub/acad/dev/trails/trails.htm

The Forest Service will provide the final approval of the layout and planning. In the event that the Contractor determines that the preliminary centerline is not suitable for trail layout because of sustainability or safety issues, the Contractor will contact the Forest Service with a proposed re-location. The Forest Service retains final approval of the relocation. Relocation outside the 25 foot centerline will require further NEPA by the Forest Service prior to the construction stage of the contract.

The product of the trail layout and planning step will be a precisely marked (with flagging or similar method) trail on the ground that has the location of features identified with survey "white cards" or wooden stakes. A trail log and a map indicating where features are and a description of

the feature will also be produced. This will be approved by the COR and inspector prior to the contractor moving on to step 2.

Step 2 Survey

Once layout and planning has occurred then a professional survey by an appropriately qualified individual(s) will be conducted by the contractor. This survey will result in an engineer approved site plan for the trail and features. It will show Best Management Practices (BMP's) and soil and erosion control features to be used during and after construction. The contractor is responsible for ensuring that survey is of detail and quality to satisfy the permitting requirements.

The product of this step will be a site plan that can be used to acquire necessary permits.

Step 3 Acquiring Permits

The Contractor shall be responsible for acquiring the required permits to complete this project. (Further description of permitting requirements included as an attachment "Jake and Bull Trail Contract Permitting Requirements." Four permits may be required:

- Land Disturbance Permit under the administration and jurisdiction of Lumpkin County
- Stream Buffer Variance for all stream crossings and work to occur within 50 feet of cold water trout streams under the administration and jurisdiction of the Georgia Environmental Protection Division (EPD) in Atlanta
- National Pollution Discharge Elimination System – Storm Water (NPDES) permit, under the jurisdiction of the Georgia EPD
- Clean Water Act Section 404 Permit under the jurisdiction of the Army Corps of Engineers

In order to secure these permits the Contractor will prepare and submit their project plan, including an Erosion and Sediment (E & S) Control Plan to the county and Georgia EPD as required. The E&S Plan must be approved by the Forest Service prior to the start of construction.

The Georgia Manual for Erosion and Sediment Control (2000) can be found at:
http://www.gaswcc.org/docs/green_book_5ed.pdf

The time frames involved in submitting applications, plans and supporting documents for review and approval by the administering agency varies by project, but it is estimated to take 90 days. No work shall begin until the required permits are obtained and copies are provided to the Forest Service

APPENDIX A: Design Parameters for Trail Class 3 Pack and Saddle

Design Parameters

Design Parameters are technical guidelines for the survey, design, construction, maintenance, and assessment of National Forest System trails, based on their Designed Use and Trail Class and consistent with their management intent[1]. Local deviations from any Design Parameter may be established based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class. **NOTE: TABLE HAS BEEN FORMATTED AND EDITED TO FIT THIS PAGE.**

Designed Use PACK AND SADDLE		**Trail Class 3**	**Trail Class 4**	**Trail Class 5**
Design Tread Width	**Wilderness** (Single Lane)	18" – 24" May be up to 48" along steep side slopes 48" – 60" or greater along precipices	24" May be up to 48" along steep side slopes 48" – 60" or greater along precipices	Typically not designed or actively managed for equestrians, although use may be accepted
	Non-Wilderness (Single Lane)	18" – 48" 48" – 60" or greater along precipices	24" – 96" 48" – 60" or greater along precipices	
	Non-Wilderness (Double Lane)	60" – 84"	84" – 120"	
	Structures (Minimum Width)	Other than bridges: 36" Bridges without handrails: 60" Bridges with handrails: 84" clear width	Other than bridges: 36" Bridges without handrails: 60" Bridges with handrails: 84" clear width	

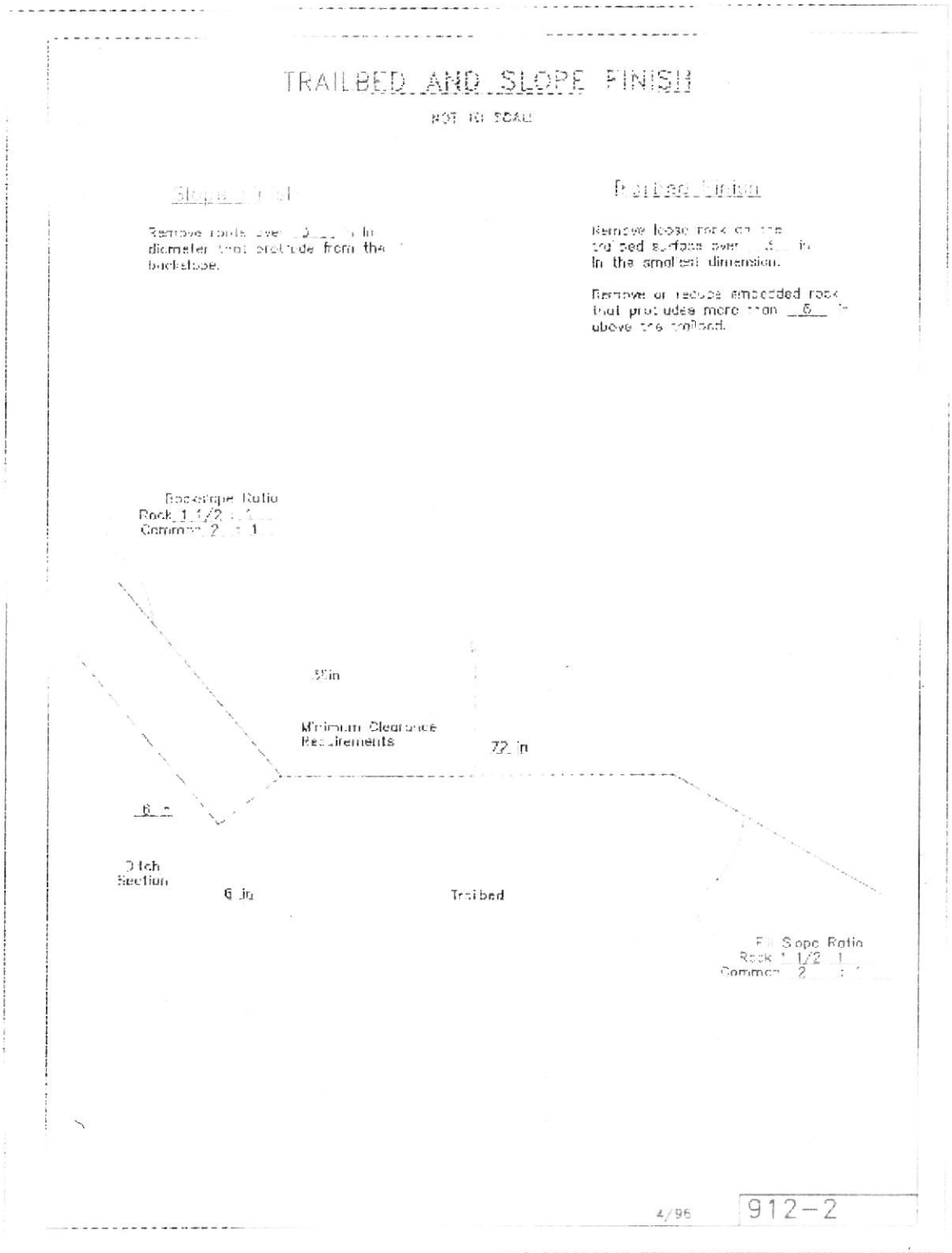
Designed Use PACK AND SADDLE		Trail Class 3	Trail Class 4	Trail Class 5
Design Surface[2]	**Type**	Native with some onsite borrow or imported material where needed for stabilization, occasional grading Intermittently rough	Native, with improved sections of borrow or imported material, routine grading Minor roughness	
	Protrusions	≤ 3" May be common, not continuous	≤ 3" Uncommon, not continuous	
	Obstacles (Maximum Height)	6"	3"	

Designed Use PACK AND SADDLE		Trail Class 3	Trail Class 4	Trail Class 5
Design Grade[2]	**Target Grade**	3% – 12%	2% – 10%	
	Short Pitch Maximum	20%	15%	
	Maximum Pitch Density	5% – 15% of trail	5% – 10% of trail	
Design Cross Slope	**Target Cross Slope**	3% – 5%	0% – 5%	
	Maximum Cross Slope	8%	5%	
Design Clearing	**Height**	10'	10' – 12'	
	Width	72" – 96"	96"	
	Shoulder Clearance	12" – 18" Pack clearance: 36" x 36"	12" – 18" Pack clearance: 36" x 36"	
Design Turn	**Radius**	5' – 8'	6' – 10'	

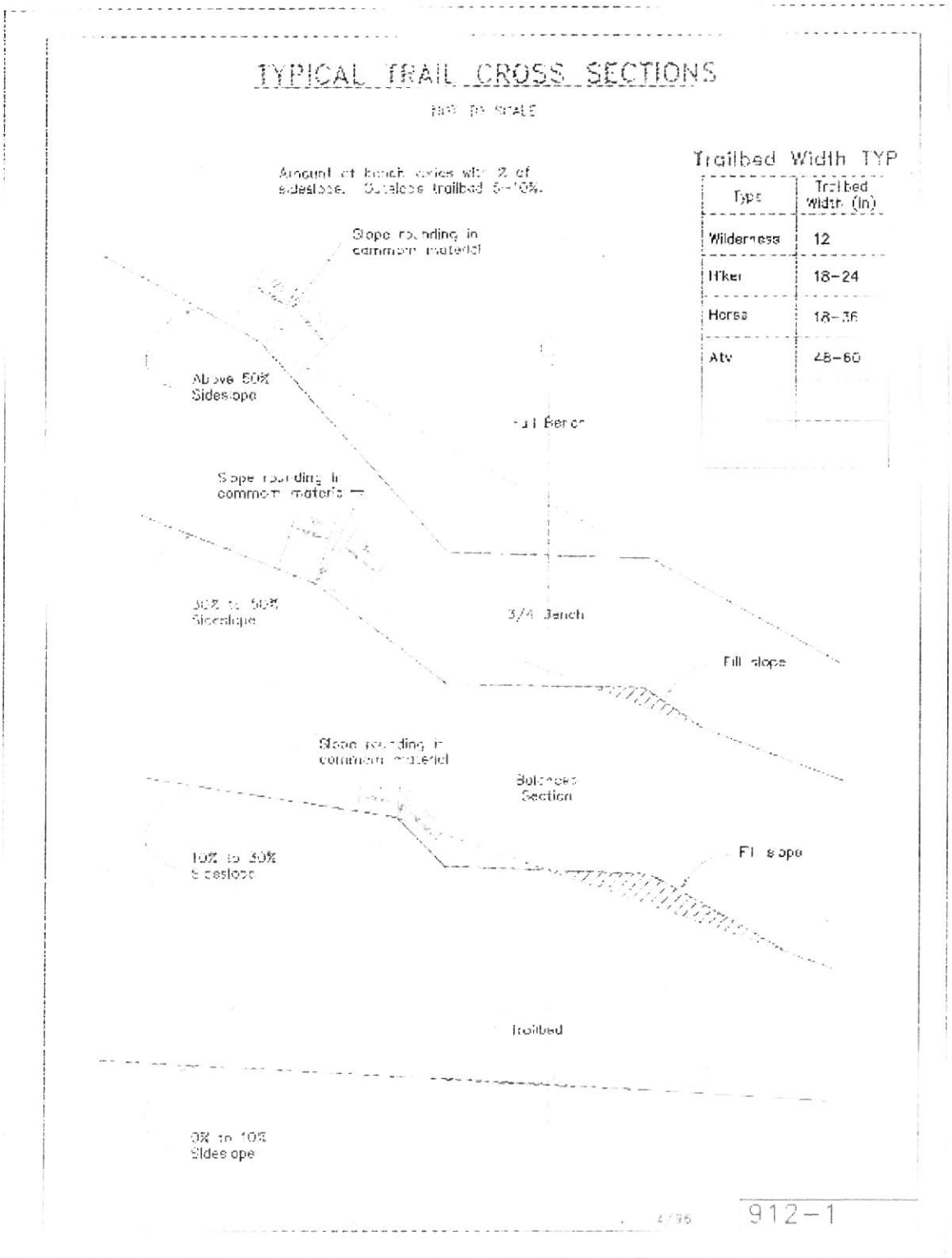
[1] For definitions of Design Parameter attributes (e.g., Design Tread Width and Short Pitch Maximum) see FSH 2309.18, section 05.

[2] The determination of trail-specific design grades, design surface, and other Design Parameters should be based upon soils, hydrological conditions, use levels, erosion potential, and other factors contributing to surface stability and overall sustainability of the trail.

APPENDIX B: Trailbed and Slope Finish



APPENDIX C: Typical Trail Cross Sections



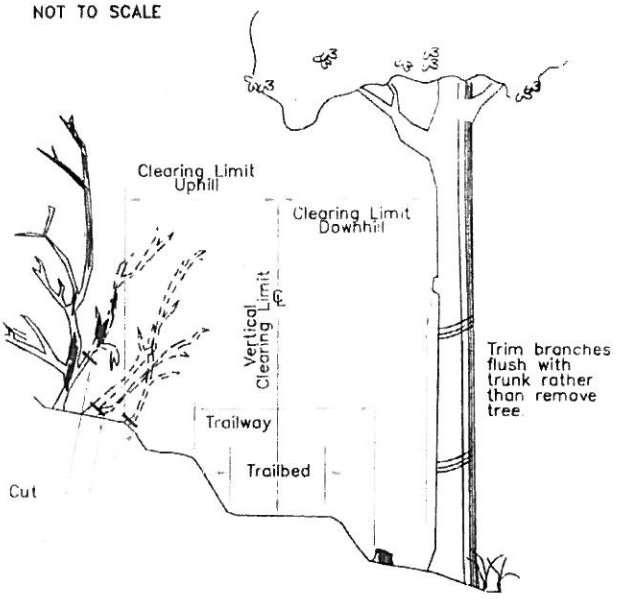
APPENDIX D: Clearing Limits

CLEARING LIMITS

NOT TO SCALE

Clearing Limits (ft)

Type	Uphill	Downhill	Height
Wilderness	2 ft	1 ft	8 ft
Hiker	2.5 ft	1.5 ft	8 ft
Horse	3.5 ft	2.5 ft	8 ft
ATV	3 ft	2 ft	8 ft



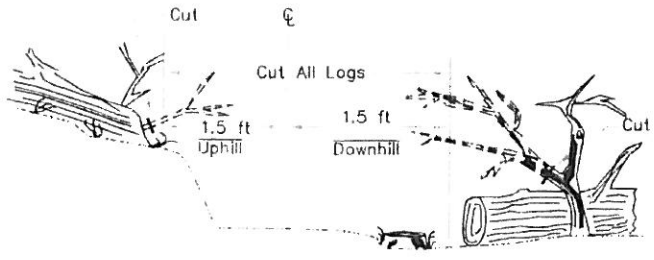
Do not remove trees over 3 inches diameter if they are over 1.5 ft from the centerline (both sides).

Remove all trees 3 inches or less in diameter if they are within 1.5 feet of centerline (both sides).

Stump Height Requirements* (inches)

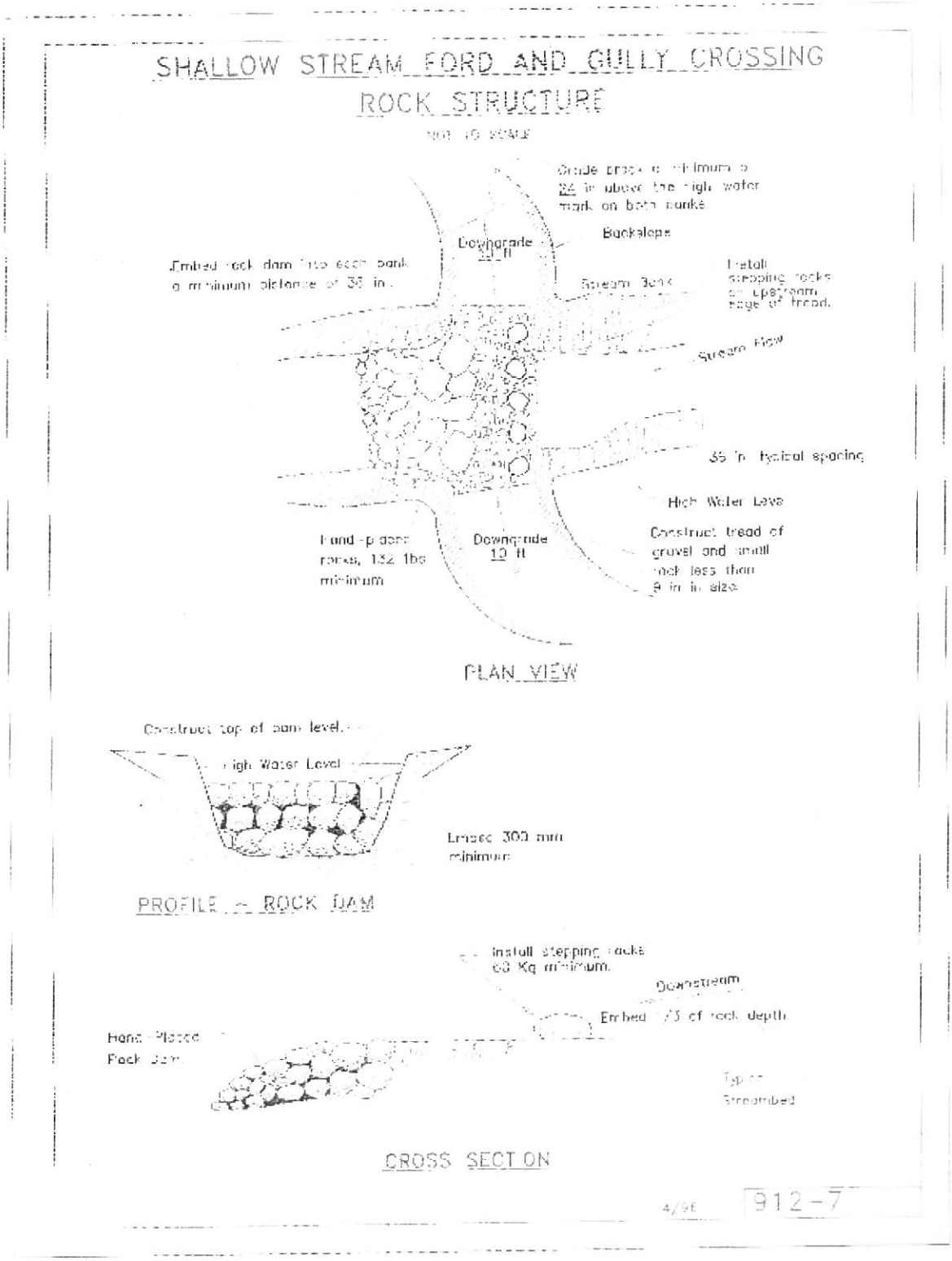
Stump Position	Side Slope	Uphill	Downhill
Stumps between the trailway and clearing limits.	Side slope less than or=to 10%	12"	12"
	Side slope over 10%	12"	12"
Stumps outside the clearing limits	Side slope less than or=to 10%	12"	12"
	Side slope over 10%	12"	12"

*All heights measured on uphill side of stumps.

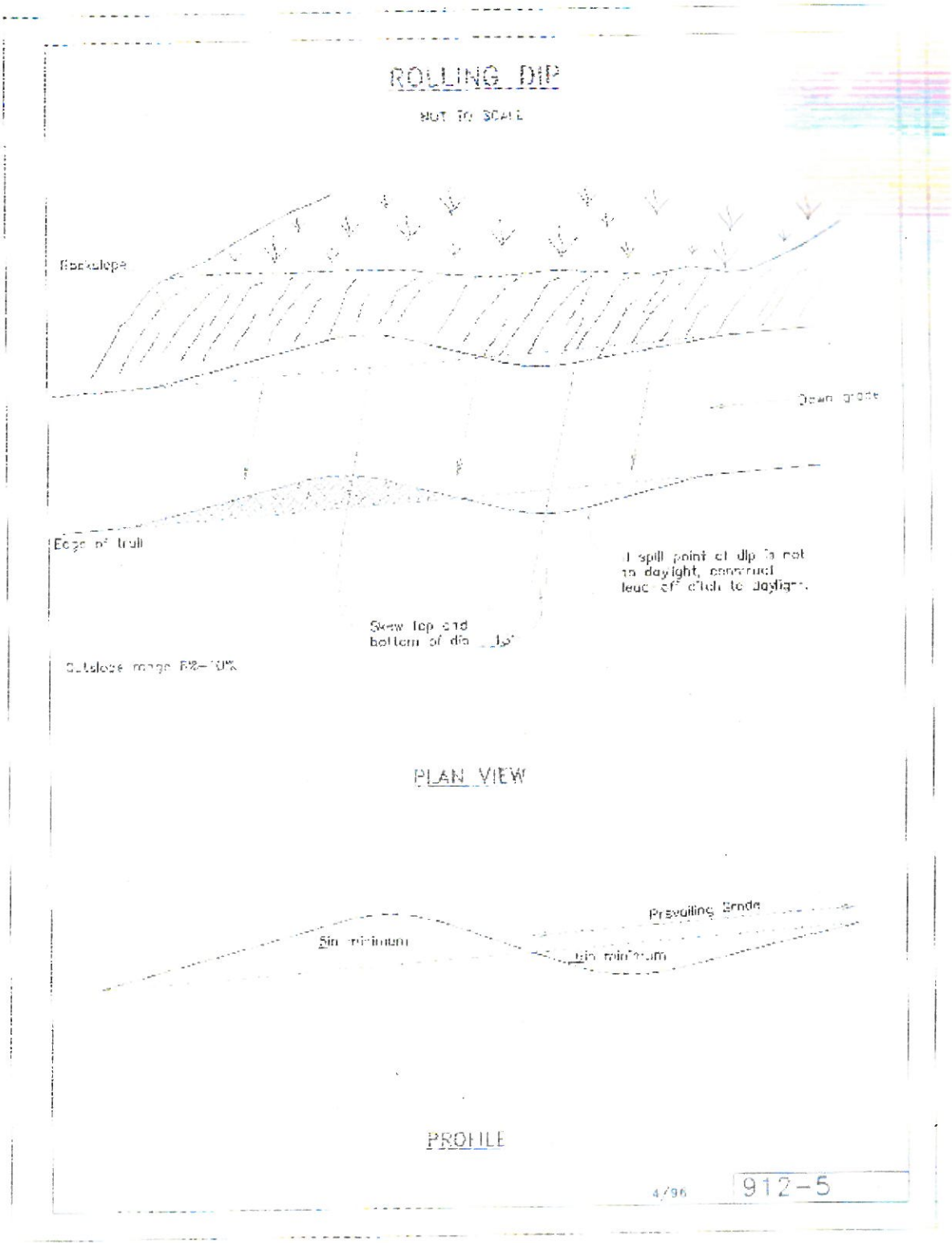


4/96 911-1

APPENDIX E: Shallow Stream Ford and Gulley Crossing Rock Structure



APPENDIX F: Rolling Dip



Optional Item 5: Gate Installation

GENERAL SPECIFICATIONS

4 gates will be replaced on Forest Service system roads. The existing gates are in poor functional condition through damage or deterioration. The existing gates will be removed and returned to the Forest Service. Gate replacement/installation will improve resource protection during seasonal closures from unauthorized activity, which causes erosion and damage to soil and water resources.

SCOPE OF PROJECT

The contractor shall furnish all equipment, labor, transportation, supervision, and perform all work required for **the Gate Replacement/Installation** on the Chattahoochee-Oconee National Forest in accordance with the specifications and provisions of the contract.

DESCRIPTION AND LOCATION

The project consists of replacing/installing 4 existing gates, 1 each on NFSRs 28B, 98, 135, and 135A. If locations change, they will be agreed upon in writing by the Forest Service and contactor to ensure similar work exists. ***See map***.

TECHNICAL SPECIFICATIONS

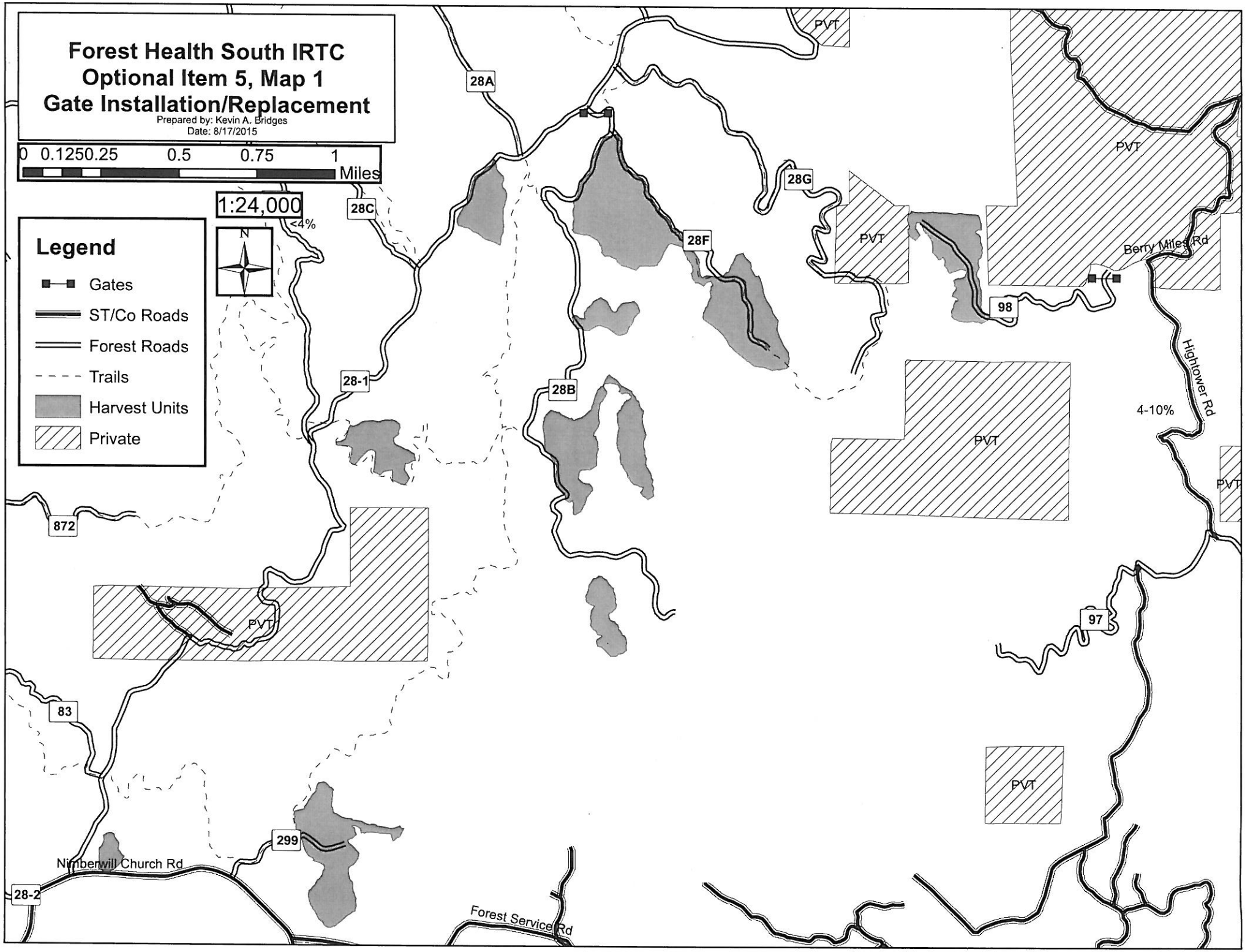
Each Gate will be installed with the specifications as diagramed in the images below.

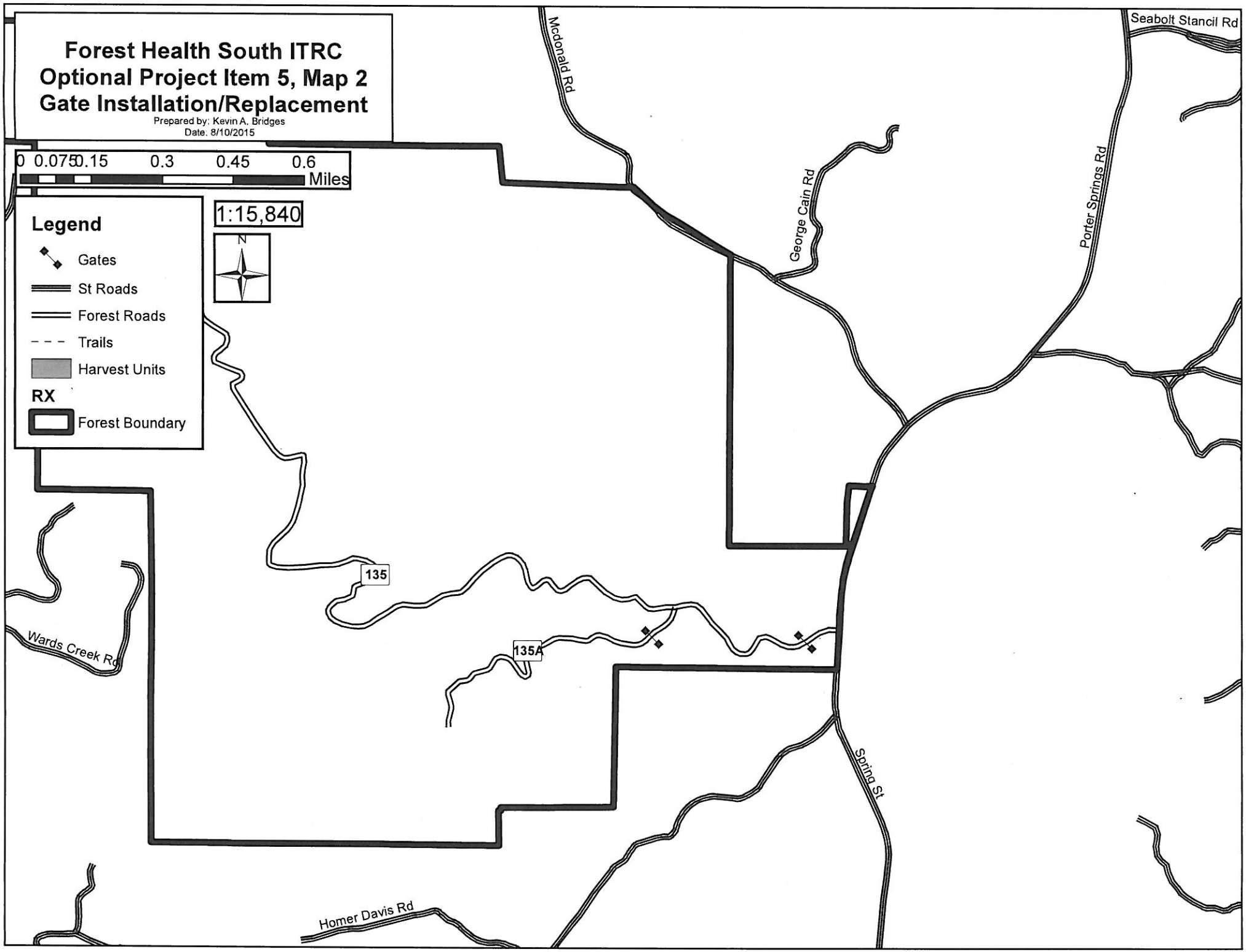
GOVERNMENT FURNISHED PROPERTY

NONE

INSPECTION AND ACCEPTANCE

Work will be accepted when the work is completed according to the project item specifications. If the work completed is accepted, the contractor shall proceed according to the Work Progress Schedule. If the work is not accepted, the contractor shall not receive project item credit until completing any remedial work required for acceptance. If the area cannot be brought up to specifications, credits or payments will be reduced or not be awarded. Typicals and descriptions may be found in the appendix following the Schedule of Items.


Forest Health South IRTC
Optional Item 5, Map 1
Gate Installation/Replacement
Prepared by: Kevin A. Bridges
Date: 8/17/2015
0 0.1250.25 0.5 0.75 1
Miles
1:24,000
<4%
N
Legend
Gates
ST/Co Roads
Forest Roads
Trails
Harvest Units
Private
28A
28C
28F
28G
28-1
28B
98
872
83
299
28-2
97
PVT
Berry Miles Rd
Hightower Rd
4-10%
Nimberwill Church Rd
Forest Service Rd


Forest Health South ITRC
Optional Project Item 5, Map 2
Gate Installation/Replacement
Prepared by: Kevin A. Bridges
Date: 8/10/2015
0 0.075 0.15 0.3 0.45 0.6
Miles
1:15,840
N
Legend
Gates
St Roads
Forest Roads
Trails
Harvest Units
RX
Forest Boundary
Mcdonald Rd
Seabolt Stancil Rd
George Cain Rd
Porter Springs Rd
135
135A
Wards Creek Rd
Spring St
Homer Davis Rd

Optional Item 6: Road Reconditioning, NFSR 135

General Specifications

NFSR 135 will be reconditioned in its entirety, 2.5 miles, to provide a more stable road condition by improving the drainage and provide for a safer travel way for the visiting public. FSR 135 receives a moderate to high amount of visitor use. Road reconditioning work will include surface blading, spot surfacing, grade dip installation and maintenance, cleaning and reconditioning of culverts, and drainage structure armoring, and mowing/brushing of roadside vegetation.

SCOPE OF PROJECT

The contractor shall furnish all equipment, labor, transportation, supervision, and perform all work required for the road reconditioning on NFSR 135 on the Chattahoochee-Oconee National Forest in accordance with the specifications and provisions of the project item.

DESCRIPTION AND LOCATION

The project for road reconditioning of NFSR 135 begins at station 00, the intersection of NFSRs 135 and CO Rd 53, and continues 2.5 miles to the end of road, EOP. ***See map.***

TECHNICAL SPECIFICATIONS

Road reconditioning will be performed in accordance with the project specifications provided in Appendix B.

GOVERNMENT FURNISHED PROPERTY

NONE

INSPECTION AND ACCEPTANCE

Project Item 1 will be accepted when the work is completed according to the project specifications. If the work completed is accepted, the contractor shall proceed according to the Work Progress Schedule. If the work is not accepted, the contractor shall not receive project credit until completing any remedial work required for acceptance. If the area cannot be brought up to specifications, credits will be reduced or not be awarded. Typicals and descriptions may be found in the appendix following the Schedule of Items.

Chattahoochee National Forest
Blue Ridge Ranger District

Description of Work Items

Forest Health South IRTC Stewardship
Optional Item 6,
NFSR 135 Road Reconditioning

Schedule of Items NFSR 135, 2.5 miles

Station/ Mile Post	**Work Description**
0+00	**BEGIN PROJECT** at the Junction of FDR 135 with County Road 53 (Porter Springs Rd). Begin Road Reconditioning and Road Brushing/Clearing. The Road Ahead will need to be Crowned with Ditches and Culverts in Sections and Outsloped with Drain Dips in Sections. Reconstruct Ditch on the Left Ahead to Station 1+25
1+75	Construct Drain Dip Drain into Existing Leadoff Ditch on Right 25' - Recondition
3+25	Construct Drain Dip Drain into Existing Leadoff Ditch Right 25' – Recondition
4+60	Reconstruct Drain Dip Recondition Leadoff Ditch Right 50' - Recondition
6+00	Construct Drain Dip Drain into Leadoff Ditch Right 50' – Recondition
7+00	Construct Drain Dip Drain into Existing Leadoff Ditch Right 75' - Recondition
9+00	Existing Mud Hole in Roadbed – Cut and Shape to Drain
10+50	Construct Drain Dip with 25' Leadoff Ditch Left
13+40	Reconstruct Drain Dip Recondition Leadoff Ditch Left 25'
15+00	Construct Drain Dip with 25' Leadoff Ditch Left

16+28	Reconstruct Drain Dip Recondition Leadoff Ditch Left 25'
18+50	Reconstruct Drain Dip Recondition Leadoff Ditch Right 25'
19+75	Reconstruct Drain Dip with 25' Leadoff Ditch Right
22+35	Reconstruct Drain Dip with 25' Leadoff Ditch Right
24+00	Junction with FDR 135-A on Right
25+75	Reconstruct Drain Dip
28+00	Construct Drain Dip – Drain to Left Reconstruct Ditch Ahead to CMP at Station 28+70
28+70	Existing 18" CMP – Clean and Recondition Inlet and Outlet
29+90	Construct Rolling Dip – Drain to Left
32+00	Construct Drain Dip – Drain to Left
34+00	Reconstruct Ditch Ahead to CMP at Station 34+50
36+00	Construct Drain Dip – Drain to Left
38+00	Construct Drain Dip – Drain to Left
40+00	Construct Drain Dip – Drain to Left
40+85	Construct Grade Sag
42+00	Construct Drain Dip
45+00	Construct Drain Dip – Drain to Left
46+00	Reconstruct Drain Dip
47+70	Existing Mudhole in Roadbed Reconstruct Existing Drain Dip
49+30	Reconstruct Drain Dip

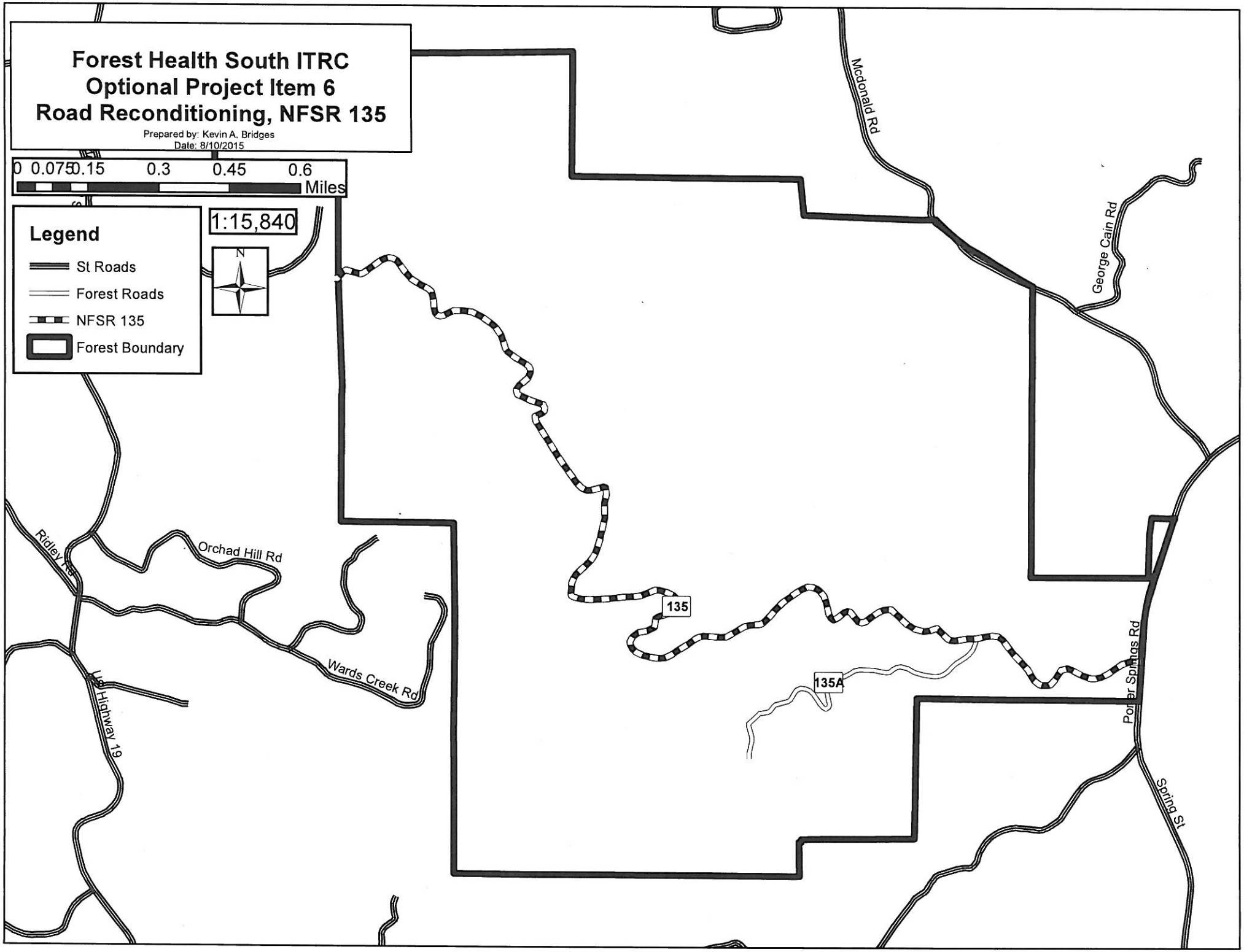
50+75	Reconstruct Drain Dip
53+75	Reconstruct Drain Dip
56+50	Construct Drain Dip to Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
58+30	Reconstruct Drain Dip
59+90	Construct Drain Dip – Drain Right into Existing Leadoff Ditch Recondition Leadoff Ditch
61+25	Construct Drain Dip to Drain Right into Existing Leadoff Ditch Recondition Leadoff Ditch
62+00	Leadoff Ditch Left 100' Across Junction with Old Forest Road – Recondition
64+42	Reconstruct Drain Dip
66+45	Construct Grade Sag to Drain 150' Each Way
67+15	Junction with Old Timber Road on Left
69+75	Reconstruct Drain Dip and Recondition Leadoff Ditch Left.
70+75	Construct Drain Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
72+50	Reconstruct Drain Dip Recondition Leadoff Ditch Left
74+00	Reconstruct Drain Dip
74+75	Existing 18" CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditches 50' Each Way of Culvert
75+50	Construct Drain Dip – Drain to Left
78+00	Construct Drain Dip – Drain to Left
78+50	Existing Mud Hole in Roadbed – Cut and Shape to Drain
79+17	Existing 24" CMP Reconstruct Ditches 50' Each Way of Culvert and Shape Roadbed to Drain

81+27	Existing 18" CMP – Recondition Reconstruct Ditches 50' Each Way of Culvert
84+00	Construct Drain Dip – Drain to Left
85+00	Existing Mud Hole in Roadbed – Cut and Shape to Drain
86+72	Construct Drain Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
87+50	Construct Drain Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
88+00	Existing Mud Hole in Roadbed – Cut and Shape to Drain
89+25	Reconstruct Drain Dip
91+00	Reconstruct Drain Dip
92+40	Existing Turnout and Leadoff Ditch Left – Recondition
94+00	Construct Drain Dip – Drain to Left
96+75	Reconstruct Drain Dip and Leadoff Ditch to Left
97+75	Construct Drain Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
99+00	Exiting Mud Hole in Roadbed Construct Grade Sag to Drain 150' Each Way
102+84	Construct Grade Sap to Drain 150' Each Way
103+35	Existing Mud Hole in Roadbed – Cut and Shape to Drain
104+96	Construct Drain Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
105+65	Existing 18" CMP – Clean and Recondition Inlet and Outlet Reconstruct Ditches 50' Each Way of Culvert
107+50	Reconstruct Drain Dip
108+56	Turnaround Area

109+75	Construct Rolling Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
111+30	Reconstruct Drain Dip Recondition Leadoff Ditch Left
113+00	Construct Drain Dip – Drain Left into Existing Leadoff Ditch Recondition Leadoff Ditch
114+25	Reconstruct Drain Dip with Leadoff Ditch Left
116+15	Construct Grade Sag
117+00	Construct Drain Dip to Drain Left
119+00	Construct Drain Dip to Drain Left
119+67	Existing 24" CMP – Recondition Inlet and Outlet Reconstruct Ditches 50' Each Way of Culvert Existing Mud Hole in Roadbed – Cut and Shape to Drain
121+45	Existing Mud Hole in Roadbed – Cut and Shape to Drain Construct Grade Sag
123+75	Existing Turnout with Leadoff Ditch Left – Recondition
124+50	Construct Drain Dip – Drain to Left
126+23	Existing 24" CMP – Recondition Inlet and Outlet
127+00	Construct Drain Dip to Drain Left
128+70	Existing 48" CMP – Recondition Inlet and Outlet Reconstruct Ditches 50' Each Way of Culvert and Shape Roadbed to Drain Existing Mud Hole in Roadbed – Cut and Shape to Drain
130+00	**END PROJECT** at Turnaround Area End Road Reconditioning and Road Brushing/Clearing.

NFSR # 135; Three Sisters

Pay Items	Name	Measurement	Unit Price	Quantity	Total Price
203 (7)	Construct Drain Dip	Each	$ 75.00	32	$ 2,400.00
203 (8)	Reconstruct Drain Dip	Each	$ 50.00	22	$ 1,100.00
210 (4)	Brushing/Clearing & Grubbing	Mile	$ 650.00	2.5	$ 1,625.00
306 (7)	Reconditioning of Roadbed Compaction A	Mile	$ 550.00	0	$ -
306 (8)	Heavy Reconditioning of Roadbed Compaction A	Mile	$ 850.00	2.5	$ 2,125.00
304 (7)	Crushed Aggregate Surfacing Gradation **GDOT #4 Stone** Compaction A	Ton	$ 24.00	864.00	$ 20,736.00
304 (8)	Crushed Aggregate Surfacing Gradation **GDOT GAB** Compaction A	Ton	$ 20.00	396.00	$ 7,920.00
601 (4)	Mobilization	Lump Sum	$ 1,300.00	1.00	$ 1,300.00
625 (4)	Seeding Fertilizing and Mulching Dry Method	Lump Sum	$ 1,450.00	1.00	$ 1,450.00
Base Total					**$ 38,656.00**


Forest Health South ITRC
Optional Project Item 6
Road Reconditioning, NFSR 135
Prepared by: Kevin A. Bridges
Date: 8/10/2015
0 0.075 0.15 0.3 0.45 0.6
Miles
1:15,840
N
Legend
St Roads
Forest Roads
NFSR 135
Forest Boundary
Mcdonald Rd
George Cain Rd
Ridley Rd
Orchad Hill Rd
Wards Creek Rd
Highway 19
135
135A
Spring St

Optional Item 7: Barricade Installation, NFSR 28F

GENERAL SPECIFICATIONS

One Barricade will be installed on NFSR 28F. The road is changing from an open road to a closed road but will continue to function as an open section of the Jake and Bull Mountain Trail System. Barricade installation will improve resource protection on the 0.5 mile dead end road by preventing unnecessary traffic on roads which lead to and damage to soil and water resources.

SCOPE OF PROJECT

The contractor shall furnish all equipment, labor, transportation, supervision, and perform all work required for **the Barricade Installation** on the Chattahoochee-Oconee National Forest in accordance with the specifications and provisions of the contract.

DESCRIPTION AND LOCATION

The project consists of installing 1 Barricade at the on NFSR 28F at the junction with 28B. If the location changes, it will be agreed upon in writing by the Forest Service and contactor to ensure similar work exists. ***See map***.

TECHNICAL SPECIFICATIONS

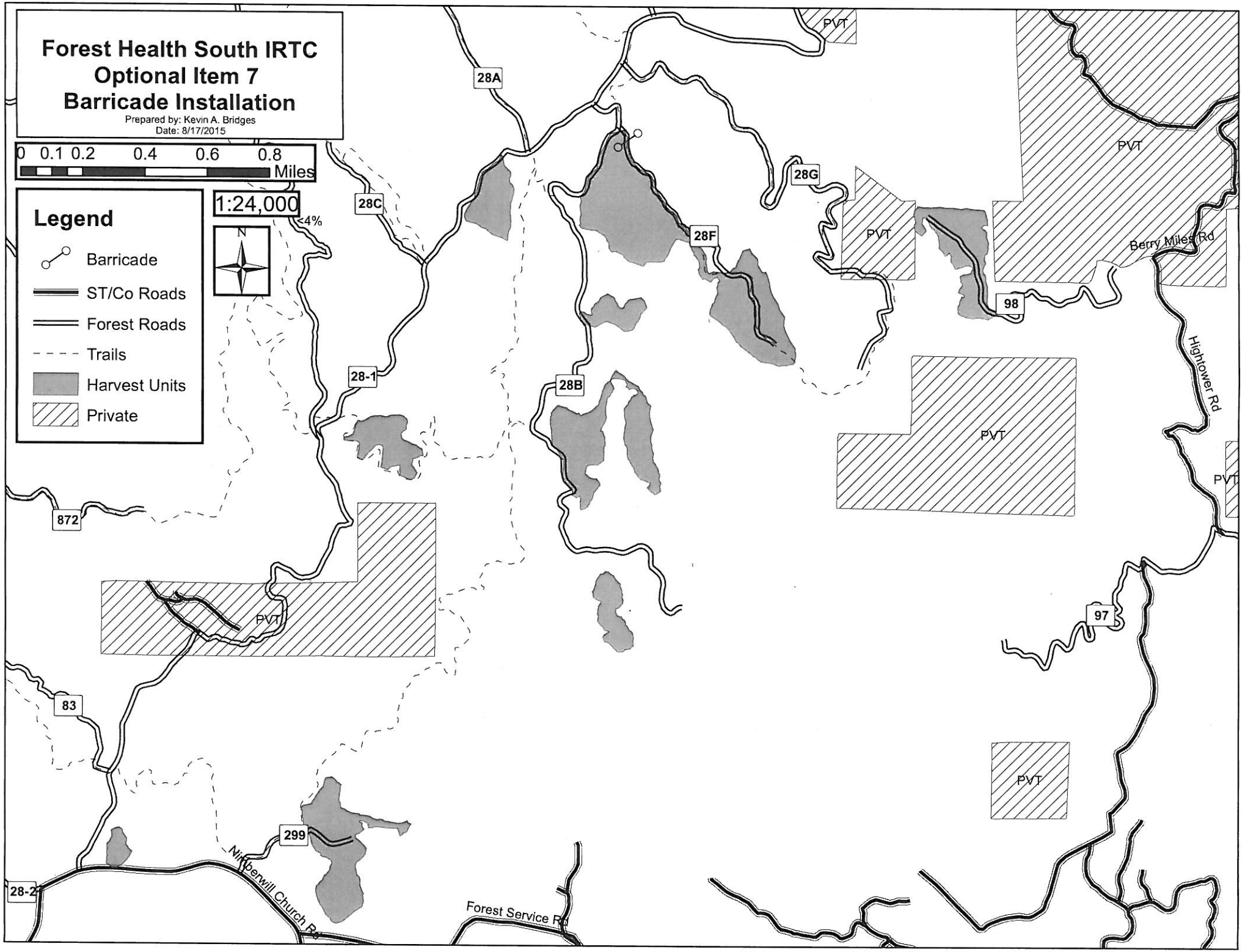
The Barricade will be installed with the specifications as diagramed in the images below.

GOVERNMENT FURNISHED PROPERTY

NONE

INSPECTION AND ACCEPTANCE

Work will be accepted when the work is completed according to the project item specifications. If the work completed is accepted, the contractor shall proceed according to the Work Progress Schedule. If the work is not accepted, the contractor shall not receive project item credit until completing any remedial work required for acceptance. If the area cannot be brought up to specifications, credits or payments will be reduced or not be awarded. Typicals and descriptions may be found in the appendix following the Schedule of Items.


Forest Health South IRTC
Optional Item 7
Barricade Installation
Prepared by: Kevin A. Bridges
Date: 8/17/2015
0 0.1 0.2 0.4 0.6 0.8
Miles
1:24,000
N
<4%
Legend
Barricade
ST/Co Roads
Forest Roads
Trails
Harvest Units
Private
28A
28C
28F
28G
28-1
28B
872
83
299
28-2
98
97
PVT
Berry Miles Rd
Highlower Rd
Nimberwill Church Rd
Forest Service Rd